

AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0007] with the following paragraph:

[0007] A magnetic field generating means 24 in the form of a coil is mounted on the piston body 18 to be movable with the piston as it is reciprocatingly displaced axially through the housing 14. The field generating means alters the rheology of the field responsive medium in proportion to the strength of the field. Wires 26 connect the coil comprising the field generating means to a controller, not shown in Figure 1. The controller is disclosed schematically in Figures 3a-3e ~~3a and 3b~~ and the controller will be described in greater detail hereinafter.

Please replace paragraph [0021] with the following paragraph:

[0021] Figure 3a is a front sectional view of a front loading washing machine including field controllable dampers and ~~first and second alternate~~ embodiment means for limiting vibration during loss of power to the washing machine.

Please add the following new paragraph after paragraph [0021] .

[0021.1] Figure 3b is a front sectional view of a front loading washing machine including field controllable dampers and a second embodiment for limiting vibration during loss of power to the washing machine.

Please replace paragraph [0022] with the following paragraph:

[0022] Figure 3c ~~3b~~ is a front sectional view of a front loading washing machine including field controllable dampers and ~~third, fourth and fifth alternate~~ embodiment means for limiting vibration during loss of power to the washing machine.

Please add the following new paragraphs after paragraph [0022] .

[0022.1] Figure 3d is a front sectional view of a front loading washing machine including field controllable dampers and a fourth embodiment for limiting vibration during loss of power to the washing machine.

[0022.2] Figure 3e is a front sectional view of a front loading washing machine including field controllable dampers and a fifth embodiment for limiting vibration during loss of power to the washing machine.

Please replace paragraph [0025] with the following paragraph:

[0025] Referring to the drawing Figures 3a-3e ~~3a and 3b~~ that disclose the five preferred embodiments of the invention, it should be noted that the first and second embodiments respectively are illustrated schematically on Figure 3a and Figure 3b and the third, fourth and fifth embodiments of the invention respectively are illustrated on Figure 3c, Figure 3d, and Figure 3e3b. ~~Multiple embodiments of the systems for limiting vibration in an apparatus when power is lost are disclosed on the same drawing figures to limit the number of figures included in the specification. The embodiments are specific and discrete systems as disclosed in accordance with the following description and moreover as identified and referred to separately as systems 130a, 130b, 130c, 130d and 130e hereinafter.~~

Please replace paragraph [0026] with the following paragraph:

[0026] Now referring to the drawings wherein like numerals denote like items, Figure 3a is a front sectional view of apparatus 100a that comprises the system 102 of the present invention for controlling the dampers 10a of apparatus 100a in the event electrical power supply to apparatus 100a is lost. The first ~~and second~~ embodiment ~~systems~~ for limiting vibration when power is lost is ~~are~~ identified in Figure 3a as 130a ~~and~~ 130b respectively. The second embodiment for limiting vibration when power is lost is identified in Figure 3b as 130b. For purposes of describing the preferred embodiments of the invention, the apparatus 100a is a front loading clothes washing machine. However it

should be understood that the apparatus may be any electrically powered apparatus with damping that is controlled by one or more field controllable dampers. More specifically, in addition to the front loading clothes washing machine 100a the apparatus may include top loading washing machine 100b shown in sectional schematic view of Figure 4 or a centrifuge (not shown). The systems and methods for controlling vibration operate the same on different apparatus so that as the description proceeds the structure and functionality of the five alternate embodiment systems will be described in use with the front loading machine 100a.

Please replace paragraph [0027] with the following paragraph:

[0027] Returning now to the clothes washing machine illustrated in Figures 3a-3e 3a and 3b, the washing machine 100a comprises a housing 102 that defines a chamber 104 with controllable dampers 10a, such as those described in reference to Figure 1, mounted in the apparatus 100a as components of the suspension and damping system. The field controllable dampers associated with top loading machine 100b are identified in Figure 4 as 10b. The front loading machine 100a has a horizontally-mounted drum 106 including a rotational portion 108 rotationally fixed and drivable relative to drum 106 by a conventional motor 112 and belt 114 system. The motor may be any conventional motor such as any AC or DC type electric motor. The motor is supported in a conventional manner by the housing 102 using the required brackets or other suitable connection members (not shown). The drum 106 (and rotational portion 108) are flexibly suspended relative to a housing or cabinet 102 by flexible springs 116, such as coil springs for example. Dampers 10a, of the type previously described hereinabove provide control of radial vibrations of the drum 106.

Please replace paragraph [0033] with the following paragraph:

[0033] If the motor 112 is a conventional direct current (DC) type motor, the kinetic energy of the drum 108 is converted to electrical energy by the DC motor and the electrical energy is available at the terminals of the DC motor. In an alternate

embodiment of the invention identified at 130b in Figure 3b 3a, during normal use of apparatus 100a the storage means 132 may receive a charge from the motor 112. The storage means may be a battery or conventional capacitor plate. Alternatively, the storage means may be a bank of batteries or capacitor plates. The motor is electrically connected to the main controller in signal transmitting relation with the controller. The electrical connection is represented in dashed font connection 136. In the alternate embodiment means for controlling vibration during loss of power 130b, the capacitor (or battery) is continuously charged during operation of apparatus 100a. The storage device 132 receives the charging signal from the main controller as represented schematically in Figure 3b 3a.

Please replace paragraph [0035] with the following paragraph:

[0035] Third, fourth and fifth embodiment means for activating dampers 10 and fail safe controller 134 during a loss of power to apparatus 100a are illustrated in Figures 3c, 3d, and 3e Figure 3b and are identified generally as 130c, 130d and 130e respectively. In third embodiment means 130c, a conventional generator 140 is located proximate spinning drum 108 and is connected to the drum by a conventional belt 142 and in this way, the kinetic energy of the drum is converted to electrical energy by the generator as the drum rotates.

Please replace paragraph [0036] with the following paragraph:

[0036] Although the electrical generator means 140 is illustrated in Figure 3c 3b as being located away from motor 112 and driven by separate drive belt 142, it should be understood that the generator may be mechanically connected to the rotating shaft 113 of motor 112 or to the motor drive belt 114.

Please replace paragraph [0038] with the following paragraph:

[0038] A fourth embodiment means for limiting vibration during a power loss is

identified at 130d in Figure 3d**3b**. The fourth embodiment means comprises an electromechanical brake. Shown schematically in Figure 3d **3b**, the brake comprises a contact member 150 with a contact end 152 located proximate the movable drum 108. The brake comprises a pair of spaced rigid plates 154a, 154b. Plate 154b is fixed and plate 154a is movable linearly relative to plate 154b. The ends of a conventional spring member 156 such as a coil spring are connected to the plates and the spring member serves to bias the plates apart. Solenoid member 158 has ends that are connected to the plates 154a and 154b and the solenoid serves to overcome the outward bias of spring member 156. During the supply of power to apparatus 100a an activating signal, in the form of a voltage, is sent to solenoid 158 from controller 120 and serves to maintain the solenoid retracted. When the solenoid is retracted the braking end 152 of contact member 150 is out of contact with the drum.

Please replace paragraph [0040] with the following paragraph:

[0040] The fifth embodiment means for limiting vibration during a power loss is identified as 130e in Figure 3e **3b**. The fifth embodiment system utilizes damper motion to induce electric current in a coil located proximate the damper. A conventional permanent magnet 160 is fixed to the exterior of the housing of dampers 10a to be movable therewith. The coil of conductive wire 162 is located proximate each magnet member and is stationary. As the damper is displaced linearly the damper induces electric current in the coil in a conventional manner well known to one skilled in the art. As shown in Figure 3e **3b**, each coil is located in signal transmitting relation to the secondary controller 134.

Please replace paragraph [0041] with the following paragraph:

[0041] When the power is supplied to apparatus 100a **100**, the current is induced in coil 162 as the dampers 10 are displaced linearly to offset vibration of drum 108. When the power is lost, the electric current is released to drive the secondary controller. The dampers 10a are activated as required by current signals from the controller 134.